AUDIT II

Country Report
HUNGARY

Editorial committee of the "Energy Center", Hungary
(Mr Gyorgy SZ. TOTH
Mr Imre KIRALY
Mr Gergely OPRA SZABO)

Final Report 03.03.2003

SUMMARY OF ENERGY AUDITS

Present Energy Policy

In 1995 the Hungarian Government approved the reorganisation and privatisation plan of the Hungarian energy sector. Within this process the complete privatisation of gas and electricity distribution companies and the partial privatisation of the electricity generating companies, the electricity grid and the Hungarian Oil and Gas Company (MOL) took place by 1998.

The Energy Policy of the European Union considers the environmental issues and the promotion of energy efficiency as one of its top priorities. These issues play an important part in Hungary's energy policy as well. This policy has been confirmed by a parliamentary decision and the same formed the basis of Government Decision No. 1107/1999. (X.8.) on the Energy Conservation Programme and Action Plan. The programme states Hungary's aim to bring the country's energy efficiency indicators - which are, at present, still significantly different – in line with the EU indicators.

The Government's energy policy fits closely with IEA Member countries' objective to create conditions in which the energy sector can make the fullest possible contribution to the sustainable economic development and the well-being of the people and the environment.

Energy Audit Programmes

There are no specific Energy Audit Programmes in Hungary.

Other Programmes with Energy Audits

The energy audit subprogram of the Széchenyi plan (2001-2002)
The energy audit subprogram grants energy audits in the industrial and in the municipal sector.
In 2001, two different subprograms linked to the two different sectors (under code SzT-EN-07 for the industrial and under code SzT-EN-08 for the municipal sector), while the two subprogrammes were merged in 2002.

The Széchenyi Plan provided grant assistance to the industrial and to the municipal sector, which engaged independent consultant auditors to carry out on-site energy audits and surveys to determine exact energy usage and recommendations of the opportunities for savings. It was launched in January 2001, and applications were closed in August 2002. Until closing of this report, there was no decision on continuing this part of the program.

The Energy Saving Programme (2000)
As one of the predecessors of the Széchenyi Plan, the Energy Saving Programme also had audit related parts. In 1999 the government initiated this programme mainly

to encourage the energy-saving related investments. One of the aims of the programme was to subsidy the energy audit, focused on the industrial sector.

The UNDP/GEF Municipal Energy Efficiency Programme (2001-2005)
Audit & Feasibility Study Fund (2002)

The United Nations Development Programme (UNDP) and the Hungarian Government initiated a five-year programme, with special attention to the needs of the municipal sector to improve their energy efficiency. As an integrated part of the UNDP/GEF Municipal Energy Efficiency Programme, the Energy Audit & Feasibility Study Fund is to provide financial support to the target groups of the programme. A comprehensive energy audit standard and a training and certification program for energy auditors are also important objectives of the project.

PHARE

In Hungary there is an Energy Efficiency Co-financing Scheme (EEFS) supported by the PHARE program. This scheme offers loans to energy users at lower interest rate than market rate in order to promote investments in energy and to lower energy cost. The PHARE contribution (altogether 5 MEUR) to the loan scheme is used as a revolving fund.

Energy Saving Credit Fund (German Coal Aid)

The energy saving fund is supporting the activity of reducing the energy consumption in Hungary. The fund co-finances projects if energy saving is guaranteed from as a result of the project.

Energy Audit Programmes in Hungary

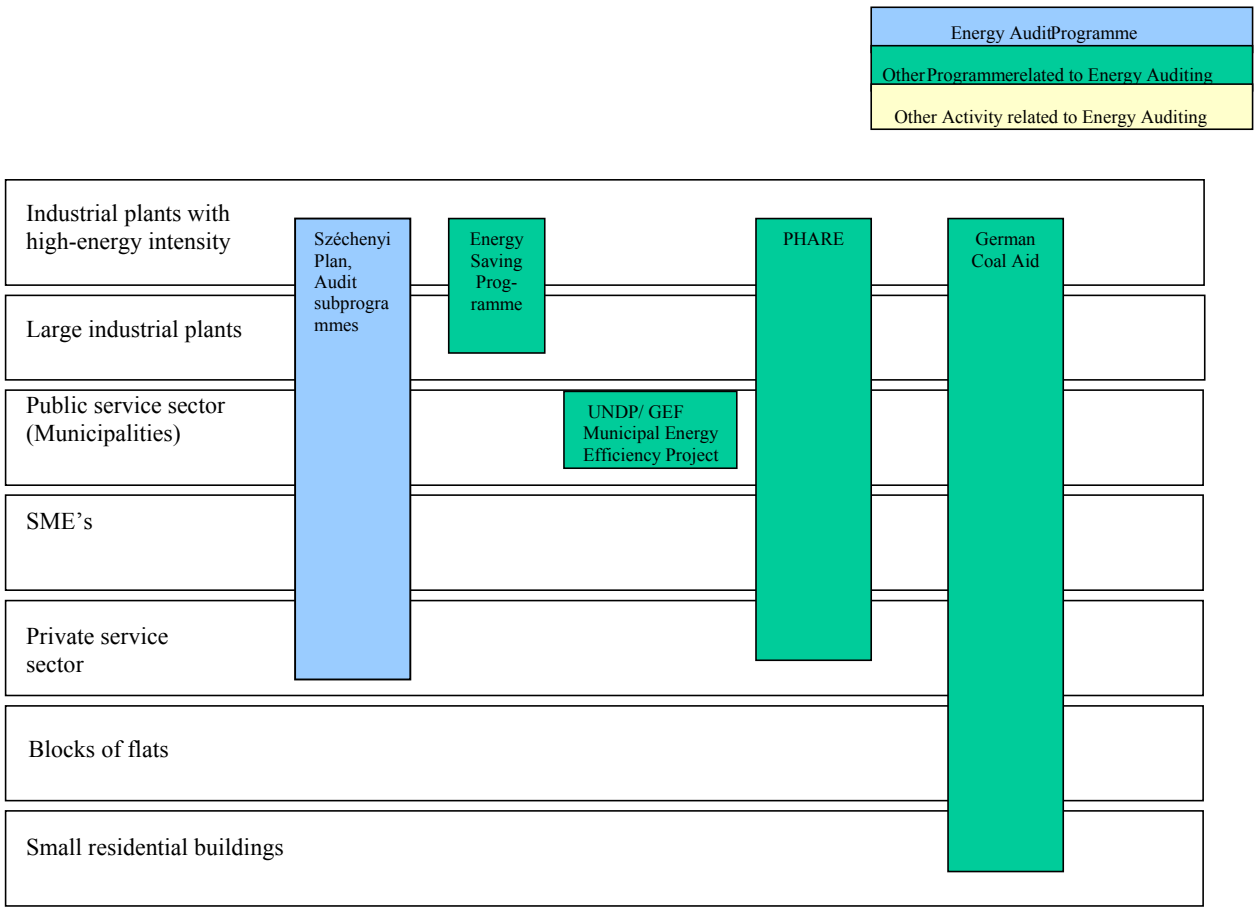

Table of EAP features coverage (Other Programmes with Energy Audits):

	UNDP/GEF	**Széchenyi Plan, Audit subprogrammes**	**Energy Saving Programme**	**PHARE**	**German Coal Aid**
Status	2001- 2005	2001-2002	2000	1998-2002	1991-2002
Administration	Energy Centre	Energy Centre	Energy Centre	Energy Centre	Energy Centre
EA models	++	++			
Auditors' tools	++				
Training, authorisation	++				
Quality control	+++	+++			
Monitoring	+++	+++		+++	++
Volumes, results	+++	+++		+++	+++
Evaluation	+	+++	+	+++	+++

+++ = Detailed information available
++ = Some information available
+ = Very little information available
= No information available / does not exist

Contacts

	Person	Address	Phone	Email address/Website
National Energy Saving Programme	Mr Andras SZALOKI	H-1092 Budapest, Raday u. 42-44.	(+36) 1 456 43 20	Andras.szaloki@energycentre.hu
German Coal Aid Fund	Mr Jozsef NEMETH	H-1092 Budapest, Raday u. 42-44.	(+36) 1 456 43 65	Jozsef.nemeth@energycentre.hu
PHARE	Mr Kalman KOSTENSZKY	H-1092 Budapest, Raday u. 42-44.	(+36) 1 456 43 66	Kalman.kostenszky@energycentre.hu
UNDP/GEF Municipal Energy Efficiency Programme	Ms Antonia BERES	H-1092 Budapest, Raday u. 42-44.	(+36) 1 456 43 92	Antonia.beres@energycentre.hu

Country Report

Country Report written by the Editorial Committee of the "Energy Center" Energy Efficiency, Environment and Energy Information Agency Non-Profit Co. (Mr Gergely OPRA SZABO, Mr Imre KIRALY and Mr Gyorgy SZ TOTH)
Based on information from the contacts above.
Information gathered October 2002 – December 2002

Disclaimer

The information contained in this report has been gathered from publicly available sources and through interviews. All efforts have been made to secure the veracity of the report, however the authors cannot guarantee the content.

THE COUNTRY REPORT

Table of Contents

1. Background and Present National Policy

1.1 Energy sector

Hungary is ready and able to create appropriate and efficient mechanism for regulation as required by the "Energy acquis" by the time of accession.

Taking into account privatisation and its impact on the Hungarian energy sector, the changes in the regulatory background, the progress of legal harmonisation, as well as the improvement of the competitiveness of the energy sector, the Ministry of Economic Affairs prepared and the Government adopted Decision No. 2199/1999 (VIII.6) Korm. on the Principles of Hungarian Energy Policy and the Business Model of the Energy Sector.

The business model outlines the following strategic objectives:
· the creation of a competitive market structure which forms an integral part of the internal energy market, while taking into consideration national features;
· the maintenance of the security of supply,
· the enforcement of environmental protection measures, in order to further sustain economic development;
· the proper access of the public to information concerning the energy industry, and the transparency of the regulatory framework.

The Government's energy policy fits closely with IEA Member countries' objective to create conditions in which the energy sector can make the fullest possible contribution to the sustainable economic development and the well-being of the people and the environment. In 1995 the Hungarian Government approved the reorganisation and privatisation plan of the Hungarian energy sector. Within this process the complete privatisation of gas and electricity distribution companies and the partial privatisation of the electricity generating companies, the electricity grid and the Hungarian Oil and Gas Company (MOL) took place by 1998. MOL is 75 % owned by private investors, MVM and it's subsidiaries (the Grid Company, National Control Centre, Paks Nuclear Power Plant, Vértes Power Plant) remained in state ownership.

With respect to Hungary's EU accession, the energy legislation efforts have been speed up to ensure the electricity and natural gas market opening in coincidence with Directive 96/92/EC and Directive 98/30/EC respectively.

The European Commission's regular report of October 1999 gave a very positive evaluation on the developments within the Hungarian Energy Sector. Particularly notable was, the restructuring of gas and electricity tariffs, and the energy strategy adopted in August 1999. This strategy provides a framework for the transposition of the acquis with particular emphasis on the liberalisation of the domestic electricity and gas markets.

The Commission outlined further objectives to be met, namely the cessation of monopolies, free access to networks, the liberalisation of prices in the energy market, the reduction of state intervention in the coal sector (solid fuels) and the improvement in energy efficiency. There is a need to improve the safety standards in the field of nuclear energy and it will be necessary to find a long-term solution for the storage of nuclear waste materials as well.

1.2 Energy efficiency

Relevant pieces of the acquis are as follows: The Energy Charter; The Synergy Programme; Crisis Measures; SAVE II Programme; Energy Efficiency and Labelling; Provisions Concerning Hot Water Boilers; Provisions Concerning Heat Generators and the THERMIE Programme.

Current status of preparation, the main elements of the preparation strategy:

The Energy Policy of the European Union considers the environmental issues and the promotion of energy efficiency as one of its top priorities. These issues play an important part in Hungary's energy policy as well. This policy has been confirmed by a parliamentary decision and the same formed the basis of Decision No. 1107/1999. (X.8.) Korm. on the Energy Conservation Programme and Action Plan. The programme states Hungary's aim to bring the country's energy efficiency indicators - which are, at present, still significantly different – in line with the EU indicators.

On the 27th February, 1995 Hungary signed the Energy Charter Treaty. Decision No. 28/1998 ratified the Convention. (III.18.) OGY of Parliament. The Parliament adopted Act XXXV of 1999 on the promulgation of the Final Act of the European Energy Charter Conference, the Energy Charter Treaty and Decisions with respect to the Energy Charter Treaty as well as of Energy Charter Protocol on Energy Efficiency and Related Environmental aspects.

The Parliament also adopted Act XXXIX of 1999 on the promulgation of the Treaty on the International Energy Programme dated 18 November 1974 in Paris and the Protocols attached thereto as well as of the Organisation of Economic Co-operation and Development's (Final) Resolution C(74)203 on the Establishment of the International Energy Agency.

In addition to the utilisation of its own financial resources, Hungary is taking part, and in the near future wishes to join the Financial Assistance Programmes of the EU to improve its energy efficiency indicators. Therefore, Hungary has been taking part in the Synergy and PHARE Programmes of the EU (which is designed to improve energy efficiency), in the THERMIE Programme (R&D in the Energy Sector) and in the SAVE II. Programme (rational use of energy).

In 1998, the Council adopted a multi-annual framework program in the energy sector (1998-2002), which is open to associated Central and East European countries, thus also to Hungary. The primary objective of the programme is to promote competitiveness of businesses, security of supply and the protection of the environment. The following special programmes were set up to implement the framework programme:

- ETAP (for co-operation among the member states)
- New Synergy (to facilitate the use of renewable energy resources)
- CARNOT (aimed at the clean and efficient use of solid fuels)
- TACIS (for the safe transportation of radioactive materials).

Concerning labelling, the harmonisation of legislation has begun with the introduction of Decree No. 1/1998 (I.12.) IKIM of the Minister of Industry, Trade and Tourism on energy labelling of household electric refrigerators, freezers and their combinations, Decree No. 77/1999 (XII.22) GM of the Minister of Economic Affairs on the indication by labelling and standard product information of the consumption of energy of household washing machines and Decree No. 78/1999 (XII.22) GM of the Minister of Economic Affairs on the indication by labelling and standard product information of the consumption of energy of household electric tumble dryers.

In order to transpose the EC directives designed to reduce the dependence on imported mineral oil, it is necessary to amend Act IL of 1993 on the safety stockpiling of imported crude oil and petroleum products and to set up the information procedure.

References made in the acquis relating to hot water boilers and heat generators are designed to enhance a more rational energy utilisation. In both cases, however, it will be necessary to develop an appropriate Hungarian legislation.

1.3 The Energy Centre, Hungary

The Energy Centre (Energy Efficiency, Environment and Energy Information Agency Non-profit Company) is a national energy efficiency agency established by Government Decree 1031/2000 (IV.7.). The founders of the Company are the Ministry of Economic Affairs, Ministry of Environment and the Hungarian Energy Office.

Aim of establishment

The Centre was established for the following purposes: the fulfilment of various tasks related to the operation of a national energy efficiency agency, the strengthening and promotion of national and international co-operations focusing on the improvement of energy efficiency and the protection of the environment. The establishment also aimed at the development of related governmental strategies, establishment of decision-making as well as participation in their implementation, with special consideration to Hungary's role in the integration process.

Activities of the Centre

The basic activities of the Centre extend to the whole country and furthermore the effects of the international activities appear in the EU states as well. These are:

* Management of the implementation of energy efficiency applications publicised in the frame of the Energy Saving Programme of "Széchenyi Plan" initiated by the Ministry of Economic Affairs
* Operation of a nation-wide energy statistical system, which includes data collection, management and analysis
* Participation in the development of the national energy policy, elaboration of long-term plans of energy policy and establishment of decisions on national level
* Fulfilment of our international requirements related to energy efficiency
* Implementation of international energy efficiency and environmental projects
* Fulfilment and strengthening of information, experience and technology transfer between Hungary and foreign (especially EU) countries
* Non-profit information supply.

2 Energy Audit Programmes

There is no stand-alone Energy Audit program running in Hungary.

3 Other Programmes with Energy Audit

3.1 The energy audit subprogram of the Széchenyi plan (2001-2002)

There is no stand-alone Energy Audit program running in Hungary. However, the economic development programme of the Hungarian government (Széchenyi Plan) included specific and segregated parts referring to this field.

As a medium-term economic development plan of the Government, the Szechenyi Plan wished to:
- ensure rapid and sustainable economic growth;
- widen the basis of growth;
- provide economic hotspots;
- provide for integration into Europe;
- mobilize domestic and foreign economic resources;
- create economic opportunities;
- provide social benefits; and
- react to the challenges of the new economic era.

The National Energy Saving Program (hereinafter NESP) is an integrated part of the Szechenyi Plan in 2001 and 2002. The NESP is considering ten main fields/subprograms to as follows:
1. Energy saving in the residential sector
2. Energy saving in the municipal sector
3. Energy saving at district heating systems
4. Energy saving in streetlighting
5. Renewable energy sources
6. Energy awareness
7. Energy audits in the industrial sector
8. Energy audits in the municipal sector
9. Energy efficient transport and traffic technologies
10. Energy saving in the SME sector

Referring to subprograms No. 7-8 (energy audits), the Széchenyi Plan provided grant assistance to the industrial and to the municipal sector, which engaged independent consultant auditors to carry out on-site energy audits and surveys to determine exact energy use and recommendations of the opportunities for savings. The program was launched in January 2001, and acceptance of applications was closed in August 2002.
(The 2003 National Energy Saving Program does not contain any budget for energy audits.)

3.1.1 Program goals

The primary objectives of this subprogram were to:
- Reduce national energy consumption
- Promote energy efficiency
- Reduce the environmental pollution
- Removing financial barriers of energy audits

3.1.2 Target sectors of the subprogram

The grant scheme was available in 2001 to the industrial sector (with restrictions) and municipal sector.

The National Energy Saving Program is reviewed annually. After the first year (2001), the target groups (industrial and municipal sector) were widened. Buildings maintained by the churches and budgetary organisations were also amongst the supported target groups in 2002. (See Table 1.)

3.1.3 Administration

The Hungarian Energy Centre on behalf of the Ministry of Economic Affairs manages the subprogram.

3.1.4 Implementing instruments

Financing/subsidies
In 2001, the provided non-refundable financial support for on-site energy audits was maximum 5 MHUF (~20 800 €[1]), maximum 75 % of audit costs.

In 2002, the maximum rate was decreasedto 50 %.(65% at municipalities.)

Table 1. :
Construction of energy audit subsidies in the Széchenyi Plan

Year	Target sector	Target Specification	Grant	Limit (HUF)	Maximum rate of subsidy (%)
2001	Municipal	All	Grant (non-refundable)	Max. 5 M HUF (20.800 €)	75 %
2001	Industrial	Energy related expenditures more than 30 million HUF (125.000 €)/year	Grant (non-refundable)	Max. 5 M HUF (20.800 €)	75 %
2002	Municipal / Industrial / Church maintained buildings / Governmental and municipal buildings	At industrial applicants: see year 2001	Grant (non-refundable)	Max. 5 M HUF (20.800 €)	50 % (65% at municipalities)

3.1.5 Energy Audit Models

There were no centralised audit models in the programme. However, in the application form it was mandatory to sign the main features of the energy audit to be carried out (i.e. the energy audit will be a

[1] Exchange rate 240 HUF/EUR is used in calculations.

walk-through or an analysing type; will the audit be a comprehensive one, referring to all energy costs, or just one or two specified energy type etc.)

3.1.6 Auditors' Tools

There were no specific tools to this program.

3.1.7 Training and authorisation of consultants

There was no specific training for auditors to this program.

To get subsidy from this program, auditors were asked to provide a list of reference works.

3.1.8 Monitoring

The experts of the Energy Centre Hungary evaluate every audit report, before the required grant is transferred.

1 % of the tenders with smaller budget is monitored preliminarily and 2 % of the tenders is monitored through a follow-up on-site monitoring. Every tender over 15 million HUF (625 000 €) is on-site monitored.

3.1.9 Auditing volumes

See the Table below:

Table 2.: Annual auditing volumes

2001	Tenders		Accepted tenders			
Target group	Total No. of tenders	Required grant (HUF)	No.	Required grant (HUF)	Total audit cost (HUF)	Approved grant (HUF)
Industrial sector	35	145 027 500 (~604 300 EUR)	34	140 827 500 (~586 800 EUR)	200 475 000 (~835 300 EUR)	128 810 000 (~536 700 EUR)
Municipal sector	61	169 705 556 (~707 100 EUR)	59	163 580 556 (~681 600 EUR)	222 333 408 (~926 400 EUR)	111 690 181 (~465 400 EUR)

2002	Tenders		Accepted tenders			
Target group	Total No. of tenders	Required grant (HUF)	No.	Required grant (HUF)	Total cost (HUF)	Grant (HUF)
Same as in 2002 (also churches and governmental and	11	31 561 950 (~131 500 EUR)	1	9 665 450 (~40 300 EUR)	8 500 000 (~35 400 EUR)	4 250 000 (~17 700 EUR)

municipal buildings)						

3.1.10 Results

Although there were no specific studies regarding the audit subprogrammes of the National Energy Saving Programme, the continuous monitoring activity of the Energy Centre (the Operating Agency of the Program) enables identifying the results gained from the audit subprogrammes. The following table shows the identified total saving potentials and the saving potentials per application at the different subprogrammes.

Year	Subprogram	Identified total saving potential	Identified saving potential per application
2001	Industrial sector	3 811 367, 3 GJ/Year	108 896,21 GJ/Year
2001	Municipal sector	1 264 855,9 GJ/Year	20 735,34 GJ/Year
2002	Industrial and municipal sector	855 673,7 GJ/Year	77 788,52 GJ/Year

3.1.11 Evaluation

There were no specific studies referring to this issue. However, we can say that the governmental energy efficiency policy had considered this program as a success. In 2001, the initially allocated 25 M HUF (~104 200 €) had to extend to the sum of 103 million HUF (~429 200 €) in the industrial sector according to the huge interests. In the municipal sector the allocated budget of 35 M HUF (~145 800 €) was increased to 75, 9 M HUF (~316 250 €) in 2002.

3.2 The Energy Saving Programme (2000)

As one of the predecessors of the Széchenyi Plan, the Energy Saving Programme also had audit related parts. In 1999, the government initiated this programme mainly to encourage the energy-saving related investments. One of the aims of the programme was to subsidise the energy audit, focused on the industrial sector.

3.2.1 Program goals

Encourage carrying out energy audits to uncover the industry’s energy saving potential.

3.2.2 Target sectors of the subprogram

Industrial sector, companies with energy related expenditure of more than 50 M HUF (~208000€).

3.2.3 Administration

The Hungarian Energy Centre on behalf of the Ministry of Economic Affairs manages the subprogram.

3.2.4 Implementing instruments

The OTP Bank Ltd. provided the subsidised loan, with a budget of 125 M HUF (~520 800 EUR).

The interest to be paid by the applicants was BUBOR (Budapest Interbank Rate) for 3 months -0.06 % decreased by the 50 percent of the current basic interest of the National Bank of Hungary, taking into consideration its changes during the interest-period.

3.2.5 Energy Audit Models

There were no obligatory audit models.

3.2.6 Auditors' Tools

There were no specified tools to help the auditors work.

3.2.7 Training and authorisation of consultants

There was no training according to this programme.

3.2.8 Monitoring

The editors have not found any monitoring activities related to the program.

3.2.9 Auditing volumes

During the 1year lifetime of this programme, there was only one audit application.

3.2.10 Results

There is no data available.

3.2.11 Evaluation

Based on informal discussions with the experts of this program, the subsidised loan is not suitable for supporting energy audits.

3.3 The UNDP/GEF Municipal Energy Efficiency Programme (2001-2005) Audit & Feasibility Study Fund (2002)

The United Nations Development Programme (UNDP) and the Hungarian Government initiated a five-year programme, with special attention to the needs of the municipal sector to improve their energy efficiency. As an integrated part of the UNDP/GEF Municipal Energy Efficiency Programme, the Energy Audit & Feasibility Study Fund is to provide financial support to the target groups of the programme. A comprehensive energy audit standard and a training and certification program for energy auditors are also important objectives of the project.

3.3.1 Program goals

Development objective:

The global objective of the project is to mitigate Hungary's greenhouse gas emissions by improving the efficiency of energy use in public sector buildings and installations. This will be achieved by addressing the relevant institutional, financial, technical and capacity barriers for energy efficiency, thus contributing to the creation of a sustainable market for energy efficiency services in Hungary. The elimination of both demand and supply side barriers for energy efficiency in the public sector is expected to result in significant and sustainable annual reductions of carbon emissions in the future.

Investments in energy efficiency directly related to the project could reduce carbon emissions by at least 300,000 tC over the 20-year lifetime of the investment projects. The economic potential for energy savings in the public sector – considering projects with a payback time of less than 10 years – is 124,000 tC annually or 2.48 MtC in 20 years. It is expected that because of the project's barrier removal activities, a significant part of these opportunities can be captured indirectly.

The development objective of the project is to help Hungary improve its energy efficiency and thus contribute to various national objectives. These objectives include reduced air pollution, more efficient use of financial and natural resources and facilitation of Hungary's integration into the European Union.

Immediate objectives:

Objective 1. Improve the development of energy efficiency policy, increase awareness, and improve co-ordination of energy efficiency programmes

This immediate objective is to strengthen the institutional framework for both the development and implementation of energy efficiency policy (in general) and for municipalities (in particular). The newly established Energy Centre will be the focus of this institutional building, together with strengthening of the capacity of local networks and of the municipalities themselves to improve energy efficiency.

Objective 2. The identification, development, and financing of energy efficiency projects in Hungarian municipalities/ municipal district heating systems.

This immediate objective is concerned with reducing the barriers to the financing of energy efficiency projects in Hungarian municipalities through the encouragement of the wider use of energy audits and feasibility studies (i.e. project identification) through the creation of a contingent fund for energy audits and feasibility studies. The objective is also to provide for the better co-ordination of financial instruments, which are already available (through the creation of a 'one stop shop' for information on financing possibilities and conditions). A further aspect of this objective is the creation of a national standard for energy audits and feasibility studies, through the creation of a national certification scheme, and the integration of this certification scheme with the financial instruments available.

Objective 3. Improve the knowledge base of municipal decision makers and municipal energy users concerning energy management and energy efficiency technologies.

3.3.2 Target sectors of the subprogram

- Hungarian municipalities,

other beneficiaries of the programme:

- Energy service companies who undertake the energy audits (and those who gain employment in the growing energy efficiency services sector) and who participate in the certification scheme for energy auditors/ energy audits.
- The new Energy Centre and the local energy advice centres
- The national policy makers in the Ministry of Economic Affairs, the Ministry of Environment, and other relevant Ministries who will receive assistance in the development and implementation of energy efficiency policy at the level of municipalities, including the important objective of modernising and improving the energy efficiency of district heating systems
- Finally, the project will bring direct benefits to the Hungarian population. GHG emissions and air pollution will be reduced as a result of the improvement in energy efficiency in Hungarian municipalities and public sector institutions which the project will bring about (reducing the pollution associated with energy production, transmission, and end use).

3.3.3 Administration

The Hungarian Energy Centre on behalf of the Ministry of Economic Affairs manages/implements the programme.

3.3.4 Implementing instruments

Audit & feasibility study fund:
Total budget: 1.535.000 USD
Annual budget (2002): 417.000 USD (100 M HUF)

Available subsidy for audits: grant of max. 40% of audit costs, max.10.400 USD (2.500.000 HUF)

Available subsidy for feasibility studies:
A, Grant of max. 30% + 20% of feasibility study costs, max. 12.500 USD (3.000.000 HUF)
B, Interest-free loan of max. 20.100 USD (5M HUF), of which 20%+20% is transferred to grant.

3.3.5 Energy Audit Models

There is no detailed energy audit model, but the Project aims to develop one, based on the audit scheme (mentioned below). This model will be a selective audit, which gives the auditor considerable freedom.

3.3.6 Auditors' Tools

One of the requirements of the fund will be a compulsory, newly developed audit scheme (for detailed audit) which will play an important role in the restructured requirement system. The audit scheme is public.

3.3.7 Training and authorisation of consultants

The Project examined the existing training possibilities. Based on the experiences it will develop a training scheme and a suitable, up-to-date curricula and will start training events for auditors in 2003.

The Project will register the existing auditors. An authorisation scheme will be developed by the end of 2003.

3.3.8 Monitoring

The use of the granted fund will be monitored according to the "General Plan" and "Controlling Regulations" for controlling activities related to the accomplishment of the objectives of the different energy efficiency programmes managed by the Energy Centre". The mentioned plan and regulations have been approved by the management of the Energy Centre.

3.3.9 Auditing volumes

The project team received 2 applications in 2002, with a support need of ca.12.000 EUR. The audits will be carried out in 2003, also financing will take place in 2003.

3.3.10 Results

Results of the audits can be calculated after the incoming audit reports.

3.3.11 Evaluation

The monitoring and evaluation team of the project is set up to evaluate the project activities and project results. A GEF (Global Environment Facility) audit report was also made on the project by international experts in the mid of 2002.

An important comment of these evaluations is that the project should express the environmental focus of the project more stressed in its communication. The evaluations find the project a well-defined, well-implemented project, however, there is little part of the main targets have been achieved because of the lenght of the project..

3.4 PHARE HUNGARY 1998-2001

3.4.1 Programme goals

In Hungary there is an Energy Efficiency Co-financing Scheme (EEFS) supported by the PHARE program. This scheme offers loans to energy users at lower interest rate than market rate in order to promote investments in energy and to lower energy cost. The Phare contribution (altogether 5 MEUR) to the loan scheme is used as a revolving fund.
The maximum maturity of loans is 8 years but the EEFS is to operate for ten years, i.e. all loans must be repaid by the end of this period.

3.4.2 Target sectors of the Scheme

The programme is aimed all the energy efficient investment including municipalities and other market actors, , district heating plans, where a minimum of 50 % of total saving comes from the energy saving.. Energy producers and suppliers are not supported in this program.

3.4.3 Administration

The Energy Centre manages the Scheme on behalf of the Ministry of Economic Affairs.

3.4.4 Implementing instruments

Financing/subsidies
The loan construction is used up-to minimum 20.0 M HUF (0.084 MEUR) investment cost at the PHARE programme. The own part of the total investment cost must be 10% at least, while the PHARE rate maximum 25%, but not more than 100 M HUF (4,170 MEUR).

3.4.5 Energy Audit Models

There are no compulsory audit models.

3.4.6 Auditor's Tools

There are no auditor's tools.

3.4.7 Training and authorisation of consultants

There was no training and authorisation for the consultants.

3.4.8 Monitoring

The companies are monitoring own energy usage and they send reports to the Energy Centre.

3.4.9 Auditing volumes

The PHARE supported EEFS became operational at the end of October 1998.
By the end of 2001, 66 applications were submitted to the two banks managing the EEFS.

3.4.10 Results

The overall project cost/investment cost of all acceptable projects under the EEFS is over 9 516 MHUF 38,06MEUR. Average payback period is 3.6 years.
The anticipated energy cost savings of the projects approved for loan and implementation amount to 1800.0 MHUF [7.2 MEUR] a year. Energy cost savings are topped by other connected savings of 775 MHUF [3.1 MEUR] a year. This means that about 57% of all cost savings is generated by energy savings.
The energy saving was 1729 TJ/3 years, and the CO2 reduction 150.000 tons/year.

3.4.11 Key Figures of the Energy Efficiency co-Financing Scheme

Year	Number of projects aproved	Investment cost	Preferential loan	Energy saving
		‘000 HUF	‘000 HUF	TJ/a
1998/99	43	7 650.2	4 648.3	1 443.1
2000	16	1 444.4	775.6	221.6
2001	7	422.2	264.7	64.3
1998-2001	66	9 516.8	5 688.6	1 729.0

3.4.12 Evaluation

The aim was to realise energy efficiently investments supported by energy audit, where the energy saving cost is minimum 50 % of the total income. 57% of all cost savings are generated by energy savings so the programme is evaluated positively.

3.5 Energy Saving Credit Fund (German Coal Aid)

In 1991 the government of Germany offered 50 Million DEM to the government of Hungary for the purpose of purchasing coal. 60 percent of the price of the coal paid to the National Bank of Hungary was reallocated to formulate a new, energy efficiency supporting fund (Govt. Decree no. 3283/91, dated in July 10, 1991.) The aim of this aid was to support investments for energy efficiency and energy saving purposes by granting preferential loan; the fund was managed by the Ministry of Industry and Trade.

3.5.1 Programme goal

The energy saving fund is supporting the activity of reducing the energy consumption in Hungary. The fund co-finances projects if energy saving is guaranteed from as a result of the project.

3.5.2 Target sector of the Scheme

- energy producers, energy supply and distributor companies
- industrial, residential and communal energy users reducing the energy consumption via heat-insulation

3.5.3 Administration

The Energy Centre manages the Scheme on behalf of the Ministry of Economic Affairs.

3.5.4 Implementing instruments

Financing/subsidies
At the German Coal Aid programme the own part must be 20% at least, the preferable loan is 80% of the total investment cost, but no more than 80 Million HUF.

3.5.5 Energy Audit Models

There are no compulsory audit models.

3.5.6 Auditor's Tools

There are no auditor's tools.

3.5.7 Training and authorisation of consultants

For the time being there is no training and authorisation for the consultants.

3.5.8 Monitoring

The participants/applicants are monitoring own energy usage and they send reports to the Energy Centre.

3.5.9 Auditing volumes

During the 10 years the German Coal Aid realised 514 investments, the total investment cost was about 17.0 Billion HUF, it means about 68 Million EUR.

The table shows the different investments and the costs and energy savings realised in the programme:

Category	Number of investment	Total cost of investments	Preferable loan	Energy saving
	pcs	Thousand HUF	Thousand HUF	TJ/year
Energy transfer equipment	241	7 483 663	5 170 510	2473,7
Energy spare technologies	41	1 703 338	1 116 429	747,4
Regulation, automatisation of technology	4	126 430	104 160	66,6
Equipment for waste heat utilisation	14	402 418	303 301	500,4
Complex energy supply systems	5	180 177	140 500	53,7
Efficient lighting investment	138	2 707 854	1 941 100	74903

Category	Number of investment	Total cost of investments	Preferable loan	Energy saving
CHP (Combined Heat and Power Generation)	20	2 634 564	1 128 300	1086,3
Utilisation of renewable en. Sources	32	1 277 605	801 797	1348,4
Energy saving equipment	4	24 364	17 750	170,6
Improvement of district heating systems	10	162 451	129 598	82,02
Optimisation of energy economy	3	122 648	80 500	62,8
Heat loss reduction by insulation	2	4 486	3 218	2,1
Total	541	16 829 998	10 937 163	7 343,6

3.5.10 Results

The loan provided is11.0 Billion HUF 44,0 Million EUR to date.
The total energy saving is 7343, 6 TJ/year.
Projects co-financed by by German Coal aid result a CO2 emission reduction of 740.000 t/year.

3.5.11 Evaluation

During the10 years of operation there were 874 applicants for the preferable loans, and the total investment budget was 29.145 Billion HUF (121,2 MEUR.) 514 applications have been accepted and supported (total investment cost of these investments are ca. 17.0 Billion HUF.(70 MEUR))
Preferential loan provided to the accepted applications was ca.11,0 Billion HUF (46,0 MEUR)
The total energy saving achieved is 7343,6 TJ/year and the CO2 reduction is 740.000 t/year.

Financial Rate of Return	Number	Total investment cost	Preferable loan	Energy saving
%		Thousand HuF/MEUR	Preferable loan	TJ/year
FRR ≥ 50	119	2 909 252	2 003 930	2450,3
50 ≥ FRR ≥ 40	67	2 120 399	1 380 198	1001,9
40 ≥ FRR ≥35	35	1 170 256	743 872	439,5
35≥ FRR ≥ 30	57	2 027 151	1 344 713	859,6
30 ≥ FRR ≥ 25	71	1 999 364	1 384 777	578,1
25 ≥FRR ≥ 20	100	3 751 378	2 351 804	1351,7
20≥ FRR ≥ 15	52	2 048 305	1 241 289	536
15 ≥ FRR	13	803 892	486 580	126,9
Total	514	16 829 998	10 937 163	7343,6

By the end of October 2002 the programme is successful. The evaluation of the programme made by the Interministerial Committee is positive.